



Pennsylvania Department of Environmental Protection

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Harrisburg, PA 17110-8200

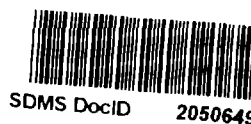
July 13, 2005

Southcentral Regional Office

717-705-4933

FAX-717-705-4930

Mr. Mike Bedard, P.E.,
Arcadis G & M, Inc.
6 Terry Drive, Suite 300
Newtown, PA 18940



Re: Pre-Drilling Plan Approval &
Hydrogeologic Report Requirements
Arcadis/Bally, [REDACTED] Site
Washington Township, Berks County

Dear Mr. Bedard:

The Drilling Plan Addendum dated May 10, 2005, will be considered adequate based upon my review of your response to the items italicized below. Please note the following comments and provide a response as necessary, (as noted on page 3 of your addendum), before you begin your aquifer test(s).

- a) Inform me when drilling, grouting and aquifer testing will occur. Call the District Office (Sue Werner, 610 916 0100) with your schedule as well.
- b) *All aquifer test data used for permitting must be derived from the production well, i.e. cased and grouted with screen or slotted casings (if applicable) in place. You must provide an adequate annular space around the casing, use a drive shoe and casing centralizers and you must grout the annular space from the bottom upward in one continuous operation.*
- c) Review Chapter 109, Section 603 of Pennsylvania's Safe Drinking Water Code regarding the location of new groundwater sources. Zone I wellhead protection areas are to be calculated using the volumetric flow equation or by using the graphs in the May 1996 compliance assistance document. There is a minimum Zone I radius of 100 feet. Delineated Zone I areas must be shown on a plot plan of appropriate scale, and included in the hydrogeologic report that is required with the permit application. The wells must be located away from parking lots, roads, buildings, residential units, storage buildings, etc. No farming activities can occur in the Zone I area. Ensure that no septic drainfields, sewer lines, or detention basins are in the Zone I area. *Provide copies of any executed deed restrictions or other information that shows the supplier's ability and willingness to control the Zone I wellhead protection area.*
- d) *Review the Surface Water Identification Protocol (SWIP) requirements with your client. The Leithsville Formation is a carbonate unit. I anticipate that the new well will meet the SWIP criteria and will need to be sampled for Microscopic Particulates as part of the new source sampling matrix. Call Derrick Havice (717 705 4152) at least two weeks in advance of the aquifer test to schedule a new source microscopic particulate analysis (MPA), or, you may elect to sample particulates using one of the commercial laboratories approved for that sample.*
- e) Monitor as many onsite and offsite wells, springs, piezometers and surface sources as are necessary to accurately describe the well/aquifer relationship. Install weirs or piezometers as necessary to monitor potential changes in stream flow. Plot and analyze all observation well data. You must be


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able to analyze off site effects and calculate aquifer parameters with the data collected during the aquifer test. *Your plan needs to more clearly define the monitoring network that you propose to observe during the aquifer tests at this site. Please submit an addendum to this pre-drilling plan that shows on a map of appropriate scale the locations you intend to observe. List the names, addresses and phone numbers of the contact person at each location. Install a nested pair of piezometers in the wetland areas adjacent to the well sites and monitor water level before, during and after the test. Show the location of all piezometers on the aforementioned map. Describe the piezometer construction. Describe the method used to collect the water level data, frequency of data collection and corrections necessary to make the data useful. Collect enough background data in your monitoring network to provide a meaningful trend before, during and after your aquifer test. I expect your monitoring plan will be similar in scope and detail to that which was previously agreed upon, tailored to fit the new well location.*

- f) *Discharge aquifer test water at a distance to prevent recirculation and to prevent masking any effects that the aquifer test may show in the monitoring network, (300 -- 500 feet across strike and down dip). You must be able to eliminate recycling as a reason for any potential recharge boundary indicated in the aquifer analysis.*
- g) *The Perkiomen Creek, at this location, is classified as TSF, (Trout Stocked Fishery). You must be able to clearly assess the impact that pumping a well at this location will have on the tributaries to the Perkiomen. The associated wetlands areas may be considered exceptional value wetlands. Familiarize yourself and your client with the requirements of Chapter 105, part 18A before you proceed to develop wells at this location. Contact the PA Fish and Boat Commission to discuss this project and provide a copy of any correspondence in the hydrogeologic report. Depending on the results of the initial aquifer test additional aquifer testing may be required.*
- h) *Page two, paragraph 4, the last line - "As this location is quite rural..." - what does that sentence mean?*

Please review the outline of the information required in the hydrogeologic report that must be included in the PWS permit application. The information must be submitted in a hydrogeologic report signed and sealed by a professional geologist licensed in the Commonwealth of Pennsylvania. If you have any questions or comments, please call.

Sincerely,



H. Thomas Fridirici, P.G.
Hydrogeologist
Water Supply Management Program

cc: Toni Hemerka, Bally Borough
Alysa Suero, DRBC
Leroy Young, Pa F & BC
Chris Urban, Pa F & BC
Mitch Cron, US EPA

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